Ecological Risk Assessment Framework Meeting

April 11, 2006, at the Ater Wynne office in Portland

DRAFT Meeting Summary

Meeting participants

Eric Blischke, EPA
Chip Humphrey, EPA
Joe Goulet, EPA
Burt Shephard, EPA
Jim Anderson, DEQ
Jennifer Peterson, DEQ
Mike Poulsen, DEQ
Rob Neely, NOAA
Ron Gouguet, NOAA
Jeremy Buck, USFWS
Erin Madden, Nez Perce Tribe
Rose Longoria, Yakama Nation
Patti Howard, CRITFC
Valerie Lee, EI
Chris Thompson, EI
Aron Borok, EI
Bob Gensemer, Parametrix
Jim McKenna, Port of Portland
Bob Wyatt, NW Natural
Rick Applegate, City of Portland
Lisa Saban, Windward Environmental
Mike Johns - Did not participate
Shannon Pierce, Windward Environmental
Les Williams, Integral
Rob Pastorok, Integral
Carl Stivers, Anchor Environmental
Taku Fuji, Kennedy Jenks
Dave Livesay, Groundwater Solutions (representing the City of Portland)
Mark Lewis, Newfields (representing the Port of Portland)
Valerie Oster, Anchor Environmental
Keith Pine, Integral (phone)
Helle Andersen, Integral (phone)

Facilitator: Mikell O'Mealy, DEQ

Purpose of the meeting and expected outcomes

The purpose of our meeting was to have an open, productive technical discussion about the LWG's 3/15/06 Ecological Risk Assessment (ERA) Decision Framework document, and to identify key issues related to the framework that need to be resolved.

Our expected outcomes for the meeting included:

- A list of technical issues related to the ERA decision framework that need to be resolved, including areas where more detail is needed to determine how the framework will be implemented at the Portland Harbor Superfund Site.
- A determination of whether agreement exists with the general approach proposed by the LWG in the ERA Decision Framework document.
- Documentation of any other issues identified by the group that technical team members and/or managers need to keep in mind as we move forward.

Chip Humphrey, Bob Wyatt and Rick Applegate gave opening remarks to provide context for our discussion and to encourage an open technical dialogue about the issues.

General reaction from EPA/partners to the LWG's proposed ERA Framework

Eric Blischke gave an overview of EPA/partners general reaction to the LWG's ERA Decision Framework document, including areas of agreement, areas of disagreement, and areas requiring more definition or clarification (as outlined in an attachment to the agenda).

Identification of technical issues related to the proposed ERA Framework

The group then discussed the areas in which EPA/partners disagree with the LWG's proposed ERA Framework, and identified technical issues related to the framework that need to be resolved. A list of those issues follows.

Technical issues related to the proposed ERA framework that need to be resolved

- We need to agree on the measurement endpoints that will be evaluated in the ERA. The LWG's proposed ERA framework does not include any of the additional measurement endpoints or lines of evidence (LOEs) that EPA/partners provided in their December 2005 data gaps memo or February 2006 Round 3 scope of work.
- We need to develop a comprehensive list of LOEs and agree on which are of primary and secondary importance, acknowledging that this is an iterative process.
- Once the primary and secondary LOEs are identified, we will need to overlay those with data gaps, and then decide on the weight we will give to filling data needs associated with primary and secondary LOEs (i.e., will we give significantly higher priority to filling data needs associated with primary LOEs, compared to secondary LOEs?).
- We need to determine the criteria we will use to evaluate different LOEs, which may include the level of uncertainty associated with the LOE, the ecological relevance of the LOE, and other factors.
- In general, we need to:
  1. identify the LOEs we'll use, including empirical data and models;
  2. identify priorities levels for each LOE, acknowledging that we'll allow some flexibility in priority determinations to make changes as data comes in;
  3. identify the data needs associated with each LOE and/or other methods (models) we'll use to evaluate each LOE; and
  4. determine how we'll evaluate the data for each LOE.
- We need to either (1) agree on acceptable error rates for the models, and the criteria we'll use to determine if/when additional follow-up sampling at individual sites is needed, or (2) acknowledge the uncertainty that exists in the models and look at the data we have to identify areas of likely risk at the site.
- We need to determine how "ecological significance" will be defined, and how we will consider ecological significance as part of the risk assessment and risk management processes.
- We need a plan for how we will determine the appropriate mid-level scales for the risk assessment, considering a place-based or receptor-specific approach, or a combination of both. Managers need to determine next steps for this issue.
- The use of probabilistic risk assessment to help us address uncertainties and assist risk management decisions deserves more discussion.

Other issues identified by the group that we need to keep in mind as we move forward

- We need to acknowledge that there will be different scales for assessing risk and making decisions.
- The group acknowledged that risk to special status species will be assessed at the individual level.

- The group agreed that our process for developing the ERA framework is an iterative one that allows for some change and adjustment over time with the availability of new information and the benefit of additional evaluation, analysis and technical discussion.
- The group agreed that we need to consider how we want data to be presented in the Round 2 Site Characterization Summary Report and what it tells us, so that the report is a tool for advancing our work on the ERA. Managers should also consider creating opportunities for cooperative data analysis early on, and explore an interactive process for developing the Round 2 report so that it meets EPA/partners needs.

Example matrix presented

EPA/partners presented an example matrix (building on Table 1 in the LWG's ERA Framework Document) that showed how different measurement endpoints should be considered in the risk assessment taking into account individual assessment endpoints, receptors, COPC groups (e.g., metals, PAHs, bioaccumulative chemicals) and exposure pathways. The group discussed the matrix approach and generally agreed that it could be a valuable tool for resolving some of the technical issues raised and for providing greater detail where needed about how concepts in the proposed ERA framework would be implemented.

General areas of disagreement with the proposed ERA Framework

The group then discussed areas where EPA/partners generally disagree with concepts in the LWG's proposed ERA Framework document, and identified needs/next steps for addressing the areas of disagreement. Follow-up actions are summarized below.

- More discussion is needed on whether water (surface and transition zone) is a primary or secondary LOE for certain receptor-contaminant pairs, and we need to clarify the basis for those determinations. The dietary pathway will also be an important LOE for some receptor-contaminant pairs.
- More discussion/evaluation is needed to determine whether benthic tissue data should be the primary LOE for the benthic community, even though limited information exists about the associated TRVs. The group agreed that we would revisit this issue as part of our iterative process for developing the ERA framework.
- More discussion is needed to determine a reasonable projection of potential future use scenarios for receptors at the site. This relates to direction from EPA/partners that all areas of the site need to be considered as potential future habitat where exposure could reasonably occur.
- More discussion is needed on the weights assigned to LOEs in the LWG's ERA Framework document, Table 1. EPA/partners may not agree with all of the assigned weights and the group acknowledged that this will be subject to negotiation.
- Although the LWG's ERA Framework proposes developing Risk Based Concentration Thresholds (RBCTs) only for primary LOEs, we should consider developing RBCTs for secondary LOEs also.
- The group acknowledged that feedback loops between the risk assessment and feasibility study are important, but that we need to be clear about the rationale underlying the risk assessment and risk management processes and separate the weighting factors for each process.